Memorandum

TO : MR. CALLAHAN

DATE: January 28, 1964

FROM : L. J. GAUTHIER

SUBJECT: ASSASSINATION OF PRESIDENT KENNEDY AND THE KILLING OF LEE HARVEY OSWALD VISUAL AIDS

The Commission's legal staff, Messrs. Joseph Ball, David Belin, Melvin Eisenberg and Norman Redlich visually examined the Zapruder and Nix movies from 10:00 A.M. to 6:30 P.M. on 1/27/64. Present were Secret Service Agent John J. Howlett, who visually fixed the position of the shots in Dallas, and Secret Service Inspector Thomas Kelley. Special Agent Shaneyfelt of the FBI Laboratory was available to answer questions concerning the frame count appearing in the Zapruder film. The results of the first day's examination by the staff is as follows:

Zapruder Movie
Nix Movie

1. SHOT ONE

The FBI's and Secret Service's approximations were accepted tentatively as being within several feet of each other behind the road sign moments before the President's head emerged at the right edge of the sign as viewed by Zapruder. Staff members agree that this position appears to be "firm" subject to a minus or plus of 6 feet either direction.

2. SHOT TWO

Approximately 3/4 seconds separates the FBI's and Secret Service's estimated positions. This represents a difference of about 13 frames. The staff has individual views concerning where Connally was shot. They are not sure where the Governor was hit feeling this may have occurred between frames 56 thru 73. They desire to narrow this approximation down to a minus or plus factor of about 6 feet in either direction. The staff is arranging to obtain a layman's report of the medical account describing the Governor's wounds in order that the turning action of the Governor as viewed in the movie can be used to more nearly fix the position he was in at the time the bullet struck him in the back. Fixing the Governor's position at the time the bullet struck, according to the staff, may make it possible to determine the frame wherein shot two occurred.

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1 - Mr. Mohr
1 - Mr. Belmont
1 - Mr. Rosen
1 - Mr. DeLoach - 1 - Mr. Conrad

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One staff member, according to Inspector Kelley, quietly spoke about the "outside" possibility of shot one going through the President with sufficient velocity remaining to penetrate Connally's body, wrist and leg. Inspector Kelley mentioned this to me confidentially. He was of the opinion that this was a personal remark made on the spur of the moment. Shot two under those ridiculous facts would have gone completely "wild" according to Kelley.

3. SHOT THREE

The FBI's and Secret Service's approximations differ between one second (18 frames) and 1.5 seconds (29 frames). Staff members are endeavoring to pinpoint the third shot (frame 89) on the Parkway. The Nix film of the third shot clearly locates Zapruder across the roadway. An approximation which occurs 1.2 seconds before the FBI's approximation is being considered as a tentative location for shot three as re-enacted on the scale model again with a minus or plus factor of 1/3 second (6 feet) either direction.

Attorney Norman Redlich asked Secret Service to determine from Orville Nix the exact position at the time he made the movies especially whether he was moving at the time he photographed the Presidential car. Redlich also inquired of me at the time we adjourned at 6:30 P.M. whether the FBI's Laboratory had determined the true speed of the Nix camera and if not, whether the FBI would obtain the camera and conduct necessary examinations. This information was discussed with Mr. Conrad who will be in touch with Redlich.

The Staff members are using the model extensively in the visual examination of the movies mentioned. The model is considered by them to be as accurate as a visual aide could possibly be constructed to a scale of 1/4" to the foot which is 48 times smaller than actual measurements. The staff realizing the many variables that exist in a model re-enactment is considering eventually having a surveyor plot "on-site" the data now being obtained from scale model re-enactments. This they feel will more nearly approximate the shooting sequence from which the speed of the Presidential car may be fixed insofar as accel eration if any between shots and the range of gun fire.

Memo to Mr. Callahan (continued)
Re: Assassination of President Kennedy
and the Killing of Lee Harvey Oswald - Visual Aids

Staff members are continuing their visual examinations of the movies. The Secret Service has a 16 mm movie "on-site" re-enactment of the shooting sequence which will be re-enacted on the scale model. I will be present to assist in the visual examination of the Zapruder and Nix movies and the further re-enactme of the views of the staff on the model. Exhibit Specialists Hughes, Rose and Arey who assisted in the preparation of the visual aids will be with me. FBI photographer Hudgins will operate the projector.

RECOMMENDATION

None. For information.